

Abstract

A nonmagnetic foundation layer is made to have a body-centered cubic crystal structure with a preferred crystal orientation plane being the bcc (110) plane. A nonmagnetic intermediate layer, provided between the foundation layer and a granular magnetic layer, has a hexagonal close-packed structure with the hcp (100) plane or the hcp (200) plane being the preferred orientation plane. Furthermore, the crystal lattice misfit amount between the nonmagnetic intermediate layer 3 and the granular magnetic layer is made to be not more than 10% for each of an a-axis and a c-axis. As a result, epitaxial growth of ferromagnetic crystals in the granular magnetic layer, which has an hcp structure, is promoted, and hence the crystallinity of the magnetic layer is increased, and thus it becomes possible to simultaneously realize an increase in coercivity and a reduction in noise. Depositing the layers on an unheated substrate yields reduces manufacturing costs.